

OWNER'S MANUAL

DieHard.

BATTERY CHARGER/MAINTAINER
1.5 Amp
Fully Automatic
Float-Mode Monitoring

Model No.
200.71220



CAUTION:
Read and follow all Safety
Rules and Operating Instructions
Before Every Use of this Product.

SAVE THESE INSTRUCTIONS.

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A.

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Please read this Owner's Manual before using your Battery Charger

The 71220 Automatic Battery Charger/Maintainer offers features to accommodate the needs for home or light commercial use. This manual will show you how to use your charger safely and effectively. Please read and follow these instructions and precautions carefully.

For information about troubleshooting, call toll-free from anywhere in the U.S.A. 7 am to 4:30 pm CST Monday through Friday.
1-800-SEARS-64 (1-800-732-7764).

For repair parts or the location of a Sears Parts and Repair Center call:
1-800-4-MY-HOME(R) (1-800-469-4663).

WARRANTY

FULL THREE YEAR WARRANTY

If, within three years from the date of purchase, this battery charger fails due to a defect in materials or workmanship, return the charger to the place of purchase and it will be replaced free of charge.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., Dept. 817WA, Hoffman Estates, IL 60179

IMPORTANT SAFETY INSTRUCTIONS

WARNING: To reduce the risk of explosion, explosive gases, or injury while using your battery charger, follow the precautions listed below:

- Read all instructions and cautions printed on the battery charger, battery, and vehicle or equipment using battery.
- Use charger only on lead-acid type rechargeable batteries, such as those used in cars, trucks, tractors, airplanes, vans, RV's, trolling motors, etc. This charger is not intended to supply power to a low voltage electrical system.
- Use only attachments recommended or sold by manufacturer. The use of attachments not recommended by the manufacturer may result in fire, electric shock, or injury.
- Do not disassemble charger. Take it to a qualified service professional if service or repair is required. Incorrect assembly may result in fire or electrical shock.
- To reduce risk of electrical shock, unplug the charger from the outlet before attempting any maintenance or cleaning.
- Always charge battery in a well ventilated area.
- Battery chargers get hot during operation and must have proper ventilation. Air needs to flow around entire charger.
- Do not set charger on flammable materials like carpeting, upholstery, paper, cardboard, etc. Charger may damage leather and melt plastic and rubber.

HELP US HELP YOU —

Remember:

- **Place** charger as far away from the battery being charged as the charger cables will permit.
- **Do not** expose charger to rain or snow.
- **Never** charge a frozen battery. If battery fluid (electrolyte) becomes frozen, bring battery into a warm area to thaw before you begin charging.
- **Never** allow battery acid to drip on charger when reading specific gravity or filling battery.
- **Never** set a battery on top of the charger.
- **Never** place charger directly above battery being charged. The gases from the battery will corrode and damage the charger.
- **Never** use charger for charging dry-cell batteries that are commonly used with home appliances like radios, stereos, remote controls, etc. These batteries may burst and cause personal injury.
- **Never** touch the battery clamps together when the charger is on. You will cause a spark.
- **Never** operate charger if it has received a hard blow, been dropped, or otherwise damaged. Take it to a qualified professional for inspection and repair.
- **Be sure** to position the charger power cord to prevent it from being stepped on, tripped over, or damaged.
- **Never** pull out the plug by the cord when unplugging the charger. Pulling on the cord may cause damage to the cord or the plug.
- **Do not** operate the charger if it has a damaged power cord or plug. Have the cord replaced.

IMPORTANT SAFETY INSTRUCTIONS

Personal Safety Precautions

For your own personal safety, please follow the following precautions:

- **Wear complete eye and clothing protection** when working with lead-acid batteries.
- **Be sure** that someone is within range of your voice to come to your aid if needed while you work with or are near a lead-acid battery.
- **Have plenty of fresh water and soap** nearby for use in case battery acid contacts your eyes, skin, or clothing. If this happens, wash immediately with soap and water. Then get medical attention.
- **Avoid touching your eyes** while working with a battery. Acid particles (corrosion) may get into your eyes. If this occurs, flush eyes immediately with running cold water for at least 10 minutes. Then immediately get medical attention.
- **Remove all personal metal items** from your body such as rings, bracelets, necklaces and watches, while working with a lead-acid battery. A battery can produce a short circuit current high enough to weld a ring (or the like) to metal, causing a severe burn.
- **Take care** not to drop any metal tool or metal object onto the battery. This may spark or short circuit the battery or another electrical device that may cause an explosion.
- **Always** operate your battery charger in an open, well ventilated area.
- **Never** smoke or allow a spark or flame in the vicinity of the battery or engine. Batteries generate explosive gases.
- **Neutralize** any acid spills thoroughly with baking soda before attempting to clean up.
- **WARNING:** Handling the cord on this product or cords associated with accessories sold with this product, will expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

BEFORE USING YOUR BATTERY CHARGER

It is important to understand your charger's requirements. This section will tell you about your charger's electrical requirements and how to prepare a battery for charging.



QUICK DISCONNECT HARNESS

To permanently attach to a small battery (i.e. motorcycle), connect the red POSITIVE harness wire eyelet to the POSITIVE battery terminal. Then connect the black NEGATIVE eyelet to the NEGATIVE battery terminal.

Loosen and remove each nut from bolts at battery terminal. One at a time, slip the eyelets of the harness wires over the bolt at battery terminal. Replace and tighten nuts to secure.

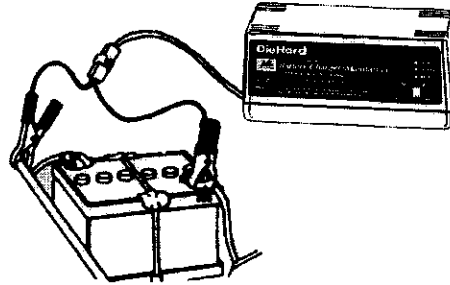
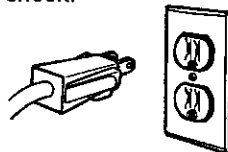
ELECTRICAL INSTALLATION

Route and secure the output away from gas line, carburetor, or other hot, sharp or moving parts to avoid damaging the wire insulation. Secure the wiring to the frame or cable using a self locking cable tie or equivalent.

PLUGGING IT IN

Your charger requires a 120V receptacle installed according to all local codes and ordinances.

WARNING: Electrical Shock Hazard. Be sure that the power cord fits properly into the outlet. If not, have a qualified technician install a proper outlet. Never alter the AC cord or plug provided. Improper connection can result in electrical shock.



NEGATIVE GROUNDED SYSTEM

USING AN EXTENSION CORD

The use of an extension cord is not recommended. If you must use an extension cord, please make sure that you follow these guidelines:

- Make sure that the pins on charger's power cord fit firmly into the extension cord, and that the extension cord fits firmly into the receptacle.
- Check that the extension cord is properly wired and in good electrical condition.
- Make sure that the wire size is large enough for its length and for the AC ampere rating, as specified in the chart below.

MINIMUM RECOMMENDED EXTENSION CORD				
Length of Cord, in Feet	25	50	100	150
AWG* Size of Cord	18	18	16	14

*AWG=American Wire Gauge

PREPARING YOUR BATTERY TO BE CHARGED

It is important that you read and follow these guidelines while you are preparing to charge your battery.

- Make sure that you have a 12 volt or 6 volt lead-acid battery. Set the selector switch to match the voltage rating of the battery to be charged.
- Clean the battery terminals. Be careful to keep corrosion from getting in or around your eyes.
- For batteries with removable cell caps, if required, add distilled water to each cell until the battery acid reaches the level recommended by the manufacturer. This will help purge excessive gases from the cells. Be careful not to overfill. If you have a sealed battery without cell caps, no action is necessary. Continue to the next step listed below.
- Take time to read all battery manufacturer's specific precautions, such as removing or not removing cell caps while charging, and recommended rates of charge.
- Wear safety glasses. See additional "Personal Safety Precautions" on page 4.
- Be sure that the area around the battery is well ventilated while it is being charged.
- If it is necessary to remove the battery from the vehicle to charge it, always remove the grounded terminal from the battery first. Turn off all vehicle accessories to avoid sparks from occurring.

NOTE: A marine battery installed in a boat must be removed and charged on shore.

USING YOUR BATTERY CHARGER

To obtain the best results from your battery charger, you must know how to use it properly. This section will tell you how to set the controls, how to charge a battery in or out of a vehicle, and how to use the engine start feature.

SETTING THE CONTROLS

SELECTOR SWITCH:

A 2-way switch is used to set the charger for a 6 VOLT or 12 VOLT battery.



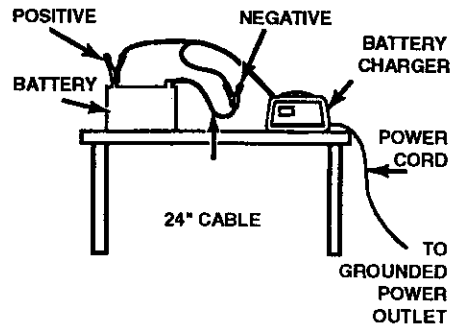
CHARGING YOUR BATTERY

Follow these steps when battery is installed in vehicle. A spark near battery may cause battery explosion. To reduce the risk of a spark near the battery:

- a) Position AC power cord and DC output cord to reduce risk of damage by hood, door, or moving engine parts.
- b) Stay clear of fan blades, belts, pulleys and other parts that can cause injury to persons.
- c) Check polarity of battery posts. Positive battery post usually has a larger diameter than the Negative post.
- d) Determine which post of battery is grounded (connected) to the chassis. If Negative post is grounded to the chassis (as in most cases), see Item e. If Positive post is grounded to the chassis, see Item f.
- e) For negative grounded vehicle, connect Positive clamp from charger to Positive ungrounded post. Connect Negative (Black) clamp to vehicle chassis or engine block away from battery. Do not connect to carburetor, fuel lines or sheet metal body parts. Connect to a heavy-gauge metal part of the frame or engine block.
- f) For positive-grounded vehicle, connect Negative (Black) clamp from charger to ungrounded Negative (Black) post of battery. Connect Positive (Red) clamp to vehicle chassis or engine block away from battery. Do not connect to carburetor, fuel lines, or sheet metal body parts. Connect to a heavy-gauge metal part of the frame or engine block.
- g) When disconnecting charger, disconnect at wall receptacle, remove clamp from vehicle chassis and then remove clamp from battery post.
- h) Always disconnect the charger before starting the vehicle.

Follow these steps when battery is outside of vehicle.

- a) Check polarity of battery posts. Positive battery post usually has a larger diameter than the Negative post.
- b) Attach at least a 24" long, 18-gauge or heavier insulated jumper cable to the Negative battery post.
- c) Connect Positive (Red) charger clamp to Positive post of the battery.
- d) Position yourself and free end of the cable as far away from the battery as possible, then connect the Negative charger clamp to the free end of the cable. Do not face battery when making this final connection.
- e) When disconnecting charger, always do so in reverse sequence of connecting procedure and disconnect the first connection while as far away from the battery as possible.
- f) A marine (boat) battery must be removed and charged on shore. To charge it on board requires equipment specially designed for marine use.



OPERATING INSTRUCTIONS

OPERATION INSTRUCTIONS

- a) Set the 6 and 12 Volt selector switch to match the voltage of the battery being charged.
- b) Connect charger to a battery as outlined.
- c) Plug AC power cord into 120 Volt, 60 Hz receptacle.
- d) The amber light indicates battery is being charged, the green light indicates battery is fully charged, and the red light indicates trouble. See more detailed explanation below.
 - When properly connected, the amber LED indicator should illuminate. This indicator will stay illuminated until the battery voltage has reached approximately 14.4 Volt and the charge current has decreased to 0.5 Amps. At this point, the amber indicator turns off and the green indicator turns on. Also at this point, the internal voltage reference of the charger will change in order to maintain the battery voltage at 13.2 Volt. At this lower voltage, charger current is typically a few milliamperes (mA) (1 mA = 0.001 A). Under this condition called maintain, most batteries can be left charging indefinitely. If the battery is loaded with 0.5 Amps or greater while in the maintain condition, the charger will change back to the normal charging condition described above.
 - Never leave the battery connected to the charger while the charger is unplugged from the AC outlet. The charger draws a few milliamperes (mA) from the battery and will eventually rundown the battery.
 - The Red LED indicates an overload condition. Common causes are shorting of the battery clamps, reverse polarity connection to a battery, and charging a problem battery. An overload condition could also be caused by charging two or more batteries in parallel or charging a battery larger than the size commonly used in a car or truck. Once the charger goes into the overload state, it will not automatically reset to the normal charge state. One of the battery clamps must first be disconnected from the battery for at least 5 seconds.

CHARGING TIMES

This charger has a rated output of 1.5 Amps. This output will vary with the age and condition of the battery being charged.

Ampere Hour Battery Capacity	Approximate Average Charge Times in Hours
10	10–12.5
12	12–15.0
20	20–25.0

MAINTENANCE AND CARE

To keep your battery charger working properly for years:

1. Clean the clamps each time you are finished charging. Wipe off any battery fluid that may have come in contact with the clamps to prevent corrosion.
2. Coil the input and output cords neatly when storing the charger. This will help prevent accidental damage to the cords and charger.

THIS CHARGER IS NOT SUBJECT TO REPAIR.

RETURN CHARGER TO PLACE OF PURCHASE FOR REPLACEMENT UNDER WARRANTY.

NOTES